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NRO REVIEW
COMPLETED

28 June 1967

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SUBJECT: Low Gamma Processing

1. In early 1966, based upon the suggestion [] a project was authorized by NRO and initiated by DD/S&T, to conduct a test to determine whether low gamma processing might be superior to current processing in providing image detail in both high light and shadow areas. By low gamma is meant a relatively lower gamma than the gamma film is currently being processed to (1.02 - 1.05 vs. 2.24 - 2.42). Film [] was selected for the test.

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2. [] a study of the reflective characteristics of various types of targets and its effect upon interpretation, is currently underway. The results of this study will undoubtedly influence the optimum processing objectives in the future.

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3. Results of the NPIC evaluation of the test photography processed to a low gamma, as compared to that processed normally, indicate there was no significant improvement or degradation due to low gamma processing. Several factors in the test may have biased the results thereof and limited the conclusions which could be drawn. These factors include the smallness of the sampling (80 usable ft. of film), [] clearer atmospheric conditions than those normally encountered in the operational area, and the relatively high contrast of the targets utilized for the test.

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4. NPIC considers processing to a lower gamma does offer promise and should be further investigated, however, the testing conducted to date is not thorough enough, nor sufficiently representative of conditions encountered in operational situations, to draw a firm conclusion or to commit a full mission (or large segment thereof) to low gamma processing.

Declass Review by NIMA / DoD

[]
Chief, Technical Intelligence Division

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